

WRIA 49 Salmonid Distribution Table (Click on the salmonid species to be linked to the species distribution map)

SALMONID SPECIES	STREAM NAME	TRIBUTARY TO:	FISH USE	EXTENT (RM)	SOURCE	BARRIERS	COMMENTS
Sockeye	Okanogan River	Columbia River	Known	0.0 - 73 / Canada border	Gustafson et al. 1997 (NMFS Sockeye Status Review rpt.); Chapman et al. 1995 (Status of Sockeye in the Mid-Columbia Region).	Adult upstream migration may be delayed by high water temperatures (>21.1°C; thermal barrier) as much as 3 weeks in some years in the lower Okanogan River during July and August; a diversion dam 4 miles upstream of Oliver, B.C.	The Okanogan River serves as a migratory corridor for adult and juvenile salmon. Okanogan River sockeye spawn in the Okanogan River upstream of Lake Osoyoos in the four-mile accessible reach to the diversion barrier. After emerging from the gravels in late March, fry begin to move downstream to rear in Lake Osoyoos. Juvenile lake residence is usually 1 year before migrating seaward in their second year of life (Chapman et al. 1995, pp. 59-87).
Sockeye	Okanogan River	Columbia River	Potential/Historic	0.0 - 73 / Canada border	Gustafson et al. 1997 (NMFS Sockeye Status Review rpt.).		Historically, sockeye salmon are thought to have utilized Lake Okanagan, Skaha, and Osoyoos in the Okanogan River Basin for juvenile rearing. Between 1939 and 1943 all returning sockeye salmon were trapped at Rock Island Dam and relocated to Lakes Wenatchee or Osoyoos or to one of 3 national fish hatcheries (Leavenworth, Entiat, and Winthrop) for artificial propagation.
Sockeye	Similkameen River	Okanogan River	Known	0.0 - 8.8 / Enloe Dam	T. Scott (Oroville-Tonasket Irrigation District); Swan et al. 1994; Fryer, J. (PhD. Thesis on Columbia River Sockeye, 1995); S. Bickford (Douglas County PUD); K. Cooper (USFS).	Enloe Dam (RM 8.8).	The Similkameen River is used by adult sockeye as a short-term, cold-water refuge during upstream migration through the Okanogan River. Behavior is very similar to adult sockeye's behavior at the confluence of the Columbia/Okanogan rivers, where the Columbia River is frequently 6-8 degrees Celsius cooler than the Okanogan River during July and August (S. Bickford, Douglas County PUD, Swan et al. 1994). Sockeye adults observed in proximity of the WDFW fish hatchery (RM 0.25; K. Cooper, USFS). T. Scott harvested sockeye below Enloe Dam in years past.
Sockeye	Similkameen River	Okanogan River	Potential/Historic	0.0 - 8.8 / Enloe Falls	Tom Scott, Oroville-Tonasket Irrigation District; Fryer, J. (PhD. Thesis on Columbia River Sockeye, 1995).	Enloe Falls (RM 8.8).	Access by sockeye up to Enloe Falls historically.
Steelhead	Aeneas Creek	Okanogan River	Presumed	0.0 - 0.5	C. Fisher (CCT), N. Wells (USFS); H. Bartlett (WDFW).	RM 0.5 State Hwy. 7 box culvert; RM 1.25, natural falls	(1) Good water quality for rearing--some of the best of the tributaries to the Okanogan River (C. Fisher, WDFW). (2) Probably flow limited (C. Fisher, CCT)
Steelhead	Aeneas Creek	Okanogan River	Potential/Historic	0.0 - 1.25 / natural falls	C. Fisher (CCT), N. Wells (USFS); H. Bartlett (WDFW).	RM 1.25, natural falls	(1) Good water quality for rearing--some of the best of the tributaries to the Okanogan River (C. Fisher, WDFW). (2) Probably flow limited (C. Fisher, CCT)
Steelhead	Antoine Creek	Okanogan River	Potential/Historic	0.0 - 11.5	K. Cooper (USFS)	Currently, alluvium deposits at the mouth; currently, dewatering/"near dry" instream conditions during summer and early fall downstream of a cement water diversion at RM 1.0 (Entrix and Golder 2001); a half-mile reach of natural falls and gradients >25% beginning at RM 11.5, continuing to 12.0 Fancher Dam.	In normal and low water years, alluvium deposits at the mouth preclude fish passage into Antoine Creek. Flows in Antoine Creek are strongly influenced by natural water year conditions and withdrawals; low flows from natural conditions and private water withdrawals limit current use (K. Cooper, USFS). Upper extent is represented by waterfalls and steep gradients which begin at RM 11.5 (Entrix and Golder 2001).
Steelhead	Bonaparte Creek	Okanogan River	Known	0.0 - 1.0	C. Fisher (CCT)	RM 1.0, natural falls	The natural falls at RM 1.0 is a full barrier to fish passage and represents the upper extent of upstream fish passage (C. Fisher, CCT). In Spring 2001, 12 adults and 4 redds were observed downstream of the Hwy. 97 bridge. In August 2002, juveniles were observed in the same reach (C. Fisher, CCT).
Steelhead	Bonaparte Creek	Okanogan River	Potential/Historic	0.0 - 1.0	C. Fisher (CCT)	RM 1.0, natural falls	It is possible that steelhead can pass upstream of the natural falls at RM 1.0 at some flows (C. Fisher, CCT).

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Steelhead	Chiliwist Creek	Okanogan River	Presumed	0.0 - 0.6	K. Cooper (USFS); H. Bartlett (WDFW); N. Wells (USFS); C. Fisher (CCT).	Partial barrier at the State Hwy. 97 culvert (RM 0.5); full barrier at the diversion dam (RM 0.6); gradients upstream of the diversion dam probably naturally preclude upstream fish passage further into the drainage.	Downstream from the partial barrier at the Hwy. 97 stream crossing, the stream has been channelized (RM 0.0 - 0.5). The diversion dam (RM 0.6) just upstream of the Hwy. 97 crossing is a full barrier to upstream fish passage. Gradients upstream of the diversion dam probably naturally preclude upstream fish passage further into the drainage.
Steelhead	Chiliwist Creek	Okanogan River	Potential/ Historic	0.0 - 0.6	K. Cooper (USFS); H. Bartlett (WDFW); N. Wells (USFS); C. Fisher (CCT).	Gradients beginning at approximately RM 0.6 probably naturally preclude upstream fish passage further into the drainage.	Historic distribution likely extended upstream to where flow and gradients become cumulatively prohibitive.
Steelhead	Loup-Loup Creek	Okanogan River	Presumed	0.0 - 0.03	C. Fisher (CCT).	Dewatering in lower Loup Loup Creek during the summer (Entrix and Golder 2001); 200 feet upstream from the mouth (RM 0.03), perched, double culverts at Burdette Rd. in Mallott are full barriers; RM 0.1, the culvert at old State Hwy. 97 is a partial barrier.	Upper extent of fish passage into Loup Loup Creek is fully blocked about 200 feet upstream from the mouth at the Burdette Road stream crossing. The two side by side culverts are perched high above the creek bed. Dewatering in lower Loup Loup Creek during summer months also limits fish use.
Steelhead	Loup-Loup Creek	Okanogan River	Potential/ Historic	0.0 - 2.5 / natural falls	C. Fisher (CCT); H. Bartlett (WDFW), K. Williams (WDFW).	Natural falls at RM 2.5	Natural falls at RM 2.5 represent the upper extent of upstream fish passage. Flows are also reduced downstream of the falls where there are also water withdrawals.
Steelhead	Okanogan River	Columbia River	Known	0.0 - 73/ Canada border	Busby et al. 1996 (NMFS Status Review of Steelhead); Chapman et al. 1994 (Status of Summer Steelhead in the Mid-Columbia River); S. Bickford (Douglas County PUD).	No barriers.	Adult steelhead use of the Okanogan River is extensive however they are only present after water temperatures have decreased in September/October. The vast majority (99%) of the steelhead using the Okanogan River are hatchery fish. No wild steelhead have been confirmed spawning in the Okanogan River, only hatchery fish. Wild adult steelhead known to have overwintered in the Okanogan River system, in late winter/ early spring have moved out of the Okanogan system and into the Methow River drainage to spawn (S. Bickford, Douglas County PUD).
Steelhead	Okanogan River	Columbia River	Potential/ Historic	0.0 - 73/ Canada border	Busby et al. 1996 (NMFS Status Review of Steelhead); Chapman et al. 1994 (Status of Summer Steelhead in the Mid-Columbia River).	No barriers.	
Steelhead	Omak Creek	Okanogan River	Known	0.0 - 11.0/ Haley Creek Road	C. Fisher (CCT).	Mission Falls (RM 5.0) is a natural, partial barrier with a 12% gradient over 0.25 miles (C. Fisher, CCT).	
Steelhead	Omak Creek	Okanogan River	Presumed	11.0 - 24.0 / two miles upstream of the Trail Creek confluence	C. Fisher (CCT).	Approximately 2 to 3 miles upstream of the Trail Crk confluence, gradient and flow cumulatively prevent upstream fish passage (C. Fisher, CCT).	The upper extent of fish passage for steelhead in naturally determined by increasing gradients and decreasing flows about 2 or 3 miles upstream of the Trail Creek confluence. The Trail Creek confluence is at RM 22.0 (Williams et al. 1975).
Steelhead	Omak Creek	Okanogan River	Potential/ Historic	0.0 - 24.0/ two miles upstream of the Trail Creek confluence	C. Fisher (CCT).	Mission Falls (RM 5.0) is a natural, partial barrier with a 12% gradient over 0.25 miles (C. Fisher, CCT). Approximately 2 to 3 miles upstream of the Trail Crk confluence, gradient and flow cumulatively prevent upstream fish passage (C. Fisher, CCT).	The upper extent of fish passage for steelhead in naturally determined by increasing gradients and decreasing flows about 2 or 3 miles upstream of the Trail Creek confluence. The Trail Creek confluence is at RM 22.0 (Williams et al. 1975).

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Steelhead	Trail Creek	Omak Creek	Presumed	0.0 - 1.0	C. Fisher (CCT).	Partial culvert barrier just upstream of the mouth of Trail Creek at the State Hwy. 155 crossing (SSHEAR). Increasing gradient upstream of the lower one mile begin to naturally limit steelhead upstream passage (C. Fisher, CCT).	Lower 1.0 mile of Trail Creek is accessible.
Steelhead	Stapaloop Creek	Omak Creek	Presumed	0.0 - 0.25	C. Fisher (CCT).	State Hwy. 155 culvert is a full barrier (C. Fisher, CCT).	The State Hwy. 155 culvert crossing is identified as a partial barrier in the SSHEAR database. The culvert is undersized and perched about 30 inches above the water surface and should be identified as a full barrier to upstream fish passage (C. Fisher, CCT).
Steelhead	Stapaloop Creek	Omak Creek	Potential/ Historic	0.25 - 4.0	C. Fisher (CCT).	Decreasing flows and increasing gradients preclude further upstream passage at RM 4.0 (C. Fisher, CCT).	Historic distribution likely extended upstream to where flow and gradients become cumulatively prohibitive.
Steelhead	Ninemile Creek	Lake Osyoos	Known	0.0 - 0.75	H. Bartlett (WDFW).		An adult steelhead was observed spawning.
Steelhead	Salmon Creek	Okanogan River	Known	0.0 - 4.3 (Okanogan Irrigation District / OID diversion dam)	H. Bartlett (WDFW); B. Steele (WDFW).	Build-up of alluvium at the mouth of Salmon Creek during all but snowmelt events in high water years (H. Bartlett, WDFW); lack of flows downstream of RM 4.3 at the OID diversion dam except during snowmelt events that result in uncontrolled spill at the OID diversion dam (Entrix and Golder 2001).	In the spring of 1985, 1986, 1994 (B. Steele, WDFW), and 1997 (H. Bartlett, WDFW), all high water years with overflow spill from the OID diversion dam at RM 4.3, steelhead were observed in the lower 4.3 miles of Salmon Creek (B. Steele, WDFW; H. Bartlett, WDFW). In April 2001, there was a planned spill to pass water downstream of the OID water diversion to facilitate the movement of steelhead smolts (planted by WDFW at the downstream side of the diversion dam) downstream to the Okanogan River. A dead steelhead was found that April 2001 at the Mill Street bridge crossing (approx. RM 0.5; H. Bartlett, WDFW). Steelhead use in Salmon Creek has not been documented by the Douglas County PUD using radio telemetry to date (S. Bickford, Douglas County PUD). A build-up of alluvium at the confluence of Salmon Creek and the Okanogan River currently prevents access by salmonids into Salmon Creek except in high water years during snowmelt events that result in uncontrolled spill at the OID diversion dam (H. Bartlett, WDFW; C. Fisher, CCT; N. Wells, USFS). In non-high water years, without spills from the OID diversion, beginning at RM 4.3
Steelhead	Salmon Creek	Okanogan River	Potential/ Historic	0.0 - 15 / Conconully Dam	C. Fisher (CCT); H. Bartlett (WDFW); N. Wells (USFS).	Conconully Dam (RM 15) constructed in 1910 is a full barrier to fish passage; no natural falls or gradients preclude upstream fish passage in the mainstem Salmon Creek.	The historic start of the mainstem of Salmon Creek is about 15 miles upstream from the confluence of Salmon Creek and the Okanogan River where the North and West forks of Salmon Creek converged in what is now the Conconully Reservoir. Conconully Dam, constructed in 1910, presently precludes fish passage upstream into the Salmon Creek drainage at RM 15.
Steelhead	N. Fk. Salmon Creek	Okanogan River	Potential/ Historic	0.0 - 8.0 / first natural barrier	Entrix and Golder 2001; H. Bartlett (WDFW); C. Fisher (CCT); N. Wells (USFS).	The USFS has identified a natural barrier about 8 miles upstream of Conconully Reservoir confluence.	Before the construction of Conconully Dam, anadromous fish may have utilized the North Fork Salmon Creek for two or three miles above the dam site (Entrix and Golder 2001). During the mapping exercise, participants suggested the upper extent for steelhead use be located at the first natural barrier identified. The first natural barrier indicated currently is from the USFS barriers database. No other information on the barrier was available at the time of mapping.
Steelhead	W. Fk. Salmon Creek	Okanogan River	Potential/ Historic	0.0 - 3.5 / first natural barrier	Entrix and Golder 2001; H. Bartlett (WDFW); C. Fisher (CCT); N. Wells (USFS).	The USFS has identified a natural barrier about 3.5 miles upstream of Conconully Reservoir confluence.	Before the construction of Conconully Dam, anadromous fish may have utilized the West Fork Salmon Creek for two or three miles above the dam site (Entrix and Golder 2001). During the mapping exercise, participants suggested the upper extent for steelhead use be located at the first natural barrier identified. The first natural barrier indicated currently is from the USFS barriers database. No other information on the barrier was available at the time of mapping.

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Steelhead	S. Fk. Salmon Creek	Okanogan River	Potential/ Historic	0.0 - 2.0	Entrix and Golder 2001; H. Bartlett (WDFW); C. Fisher (CCT); N. Wells (USFS).	No natural barrier has been identified on S. Fk. Salmon Creek.	Before the construction of Conconully Dam, anadromous fish may have utilized the South Fork Salmon Creek for two or three miles above the dam site (Entrix and Golder 2001). During the mapping exercise, participants suggested the upper extent for steelhead use be located at the first natural barrier identified. No natural barrier has been identified on the South Fork Salmon Creek so the upper extent was mapped approximately two miles upstream of the Conconully dam site as per the Entrix and Golder 2001 report.
Steelhead	Similkameen River	Okanogan River	Known	0.0 - 8.8/ Enloe Dam	Entrix and Golder 2001; H. Bartlett (WDFW); C. Fisher (CCT); N. Wells (USFS).	Enloe Dam (RM 8.8).	
Steelhead	Similkameen River	Okanogan River	Potential/ Historic	0.0 - 8.8/ Enloe Falls	Entrix and Golder 2001; H. Bartlett (WDFW); C. Fisher (CCT); N. Wells (USFS).	Enloe Falls (RM 8.8).	Historic distribution likely extended upstream to prohibitive gradients.
Steelhead	Siwash Creek	Okanogan River	Presumed	0.0 - 1.5	K. Cooper (USFS).	Low flows/dewatering.	From July 10 through Nov. 30, 2000, Siwash Creek was completely dry downstream of the Okanogan Conservation District water quality monitoring station (RM?). Flows in Siwash Creek are strongly influenced by water year conditions and withdrawals (K. Cooper, USFS).
Steelhead	Siwash Creek	Okanogan River	Potential/ Historic	0.0 - 1.5	CREP mapping.	Low flows/dewatering.	From July 10 through Nov. 30, 2000, Siwash Creek was completely dry downstream of the Okanogan Conservation District water quality monitoring station (RM?). Flows in Siwash Creek are strongly influenced by water year conditions and withdrawals (K. Cooper, USFS).
Steelhead	Tonasket Creek	Okanogan River	Known	0.0 - 0.75	T. Scott (O-TID); D. Buckmiller (USFS); H. Bartlett (WDFW); C. Fisher (CCT).		Observed one female steelhead immediately upstream of the Chesaw/Molson Cutoff Rd.
Steelhead	Tonasket Creek	Okanogan River	Presumed	0.75 - 1.25	T. Scott (O-TID); D. Buckmiller (USFS); H. Bartlett (WDFW); C. Fisher (CCT).	At RM 1.0 a falls/cascade of large metal debris may restrict upstream fish passage (N. Wells, T. Scott). Barrier status requires field confirmation.	
Steelhead	Tonasket Creek	Okanogan River	Potential/ Historic	0.0 - 1.25	T. Scott (O-TID); D. Buckmiller (USFS); H. Bartlett (WDFW); C. Fisher (CCT).	Gradients and bedrock likely naturally restrict upstream fish passage beginning at about RM 1.25.	Historic distribution likely extended upstream to where flow and gradients become cumulatively prohibitive.
Steelhead	Tunk Creek	Okanogan River	Known	0.0 - 0.5 (McAllister Falls)	Feddersen, L. (CCT).	At RM 0.5, McAllister Falls is a natural barrier.	
Steelhead	Tunk Creek	Okanogan River	Potential/ Historic	0.0 - 0.5 (McAllister Falls)	Feddersen, L. (CCT).	At RM 0.5, McAllister Falls is a natural barrier.	
Steelhead	Whitestone Creek	Okanogan River	Presumed	0.0 - 0.1	N. Wells (USFS).	At RM 0.1, the River Loop Rd. culvert is a partial barrier.	
Steelhead	Whitestone Creek	Okanogan River	Potential/ Historic	0.0 - 0.75	N. Wells (USFS).		Historic distribution likely upstream to where flow and gradients become cumulatively prohibitive.
Summer/ Fall Chinook	Okanogan River	Columbia River	Known	0.0 - 73 / Canada border	Myers et al. 1998 (NMFS Chinook Status Review rpt.)	No barriers.	Small populations (abundance estimated at 100 - 1,000) of summer chinook salmon spawn in the Okanogan River.

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Summer/ Fall Chinook	Okanogan River	Columbia River	Potential/ Historic	0.0 - 73 / Canada border	Chapman et al. 1994a (Status of Summer/Fall Chinook in the mid-Columbia Region)	No barriers.	
Summer/ Fall Chinook	Similkameen River	Okanogan River	Known	0.0 - RM 8.8 / Enloe Dam	Myers et al. 1998 (NMFS Chinook Status Review rpt.)	Enloe Dam (RM 8.8).	Spawning occurs up to Enloe Dam (RM 8.8).
Summer/ Fall Chinook	Similkameen River	Okanogan River	Potential/ Historic	0.0 - RM 8.8 / Enloe Falls	Myers et al. 1998 (NMFS Chinook Status Review rpt.).	Enloe Falls (RM 8.8).	Access upstream to Enloe Falls historically.
Spring Chinook	Omak Creek	Okanogan River	Potential/ Historic	0.0 - 5.0	Chapman et al. 1994; Entrix and Golder 2001.	Mission Falls, a natural barrier to spring chinook at RM 5.0.	
Spring Chinook	Okanogan River	Columbia River	Potential/ Historic	0.0 - 73 (Canada Border)	Chapman et al. 1995a (Status of Spring Chinook Salmon in the Mid-Columbia).	No barriers.	
Spring Chinook	Salmon Creek	Okanogan River	Potential/ Historic	0.0 - 15 (confl. of W. and N. forks of Salmon Creek)	H. Bartlett (WDFW); K. Cooper (USFS); N. Wells (USFS); K. Williams (WDFW); Chapman et al. 1995a (Status of Spring Chinook Salmon in the Mid-Columbia).	Build-up of alluvium at the mouth of Salmon Creek; lack of flows downstream of the OID diversion dam at RM 4.3; Conconully Dam (RM 15); no natural falls or prohibitive gradients up to Conconully Dam.	Potential/ Historic use of Salmon Creek mainstem for rearing upstream to the Conconully Dam barrier. The North Fork and West Fork of Salmon Creek converged about 15 miles upstream from the confluence of Salmon Creek and the Okanogan River, at what is now the Conconully Reservoir. Conconully Dam, constructed in 1910, presently precludes fish passage upstream into the Salmon Creek drainage at RM 15.
Spring Chinook	Similkameen River	Okanogan River	Potential/ Historic	0.0 - 8.8 / Enloe Falls	H. Bartlett (WDFW); K. Cooper (USFS); N. Wells (USFS).	Enloe Falls (RM 8.8).	